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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,886	04/01/2005	Yoshinori Endo	029267.56102US	7725

23911 7590 06/11/2007
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EXAMINER

LEE, BENJAMIN C

ART UNIT	PAPER NUMBER
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2612

MAIL DATE	DELIVERY MODE
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06/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,886

Applicant(s)

ENDO ET AL.

Examiner

Benjamin C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☒ Claim(s) 4 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response To Amendment

Claim Status

1. Claims 1-21 are pending.

Claim Objections

2. Claim 21 is objected to because of the following informalities: In claim 21, line 4, "the include" should have read --that include--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. Claims 1-2, 5, 8-9, 13-14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki et al. (US 6,320,518).

1) Regarding claim 1:

Saeki et al. discloses a map data transmission method (Figs. 2a-2b, 3a-3b and 6; col. 14, "embodiment 3"; col. 17, "embodiment 6"; col. 22, "embodiment 8") comprising: determining a recommended route (col. 22, lines 44-67) extending from a current position to a destination; extracting map data that include road shape information indicating shapes of roads and road connection information indicating conditions with which the roads connect with one another (Figs. 7, 9-11, 15-17 depicting roads having shapes and connections recreated using received information), over a slicing range set within a predetermined distance from the determined recommended route (col. 22, lines 62-67; col. 24, lines 8-15); making a decision as to whether or not the road connection information is to be eliminated from the extracted map data (Fig. 6; col. 14, lines 13-65; col. 23, lines 24-30 in which roads eliminated include both road

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shape and road connection information); and transmitting the road shape information of the roads (included in the map data) obtained by eliminating the road connection information corresponding to the roads from the extracted map data if results of the decision indicate that the road connection information is to be eliminated (col. 14, lines 13-65; col. 23, lines 24-30, whereby eliminated/unselected map data includes road shape information as well as road connection information).

2) Claim 2 (depends on claim 1): wherein geographical conditions are set for the map data; and the decision as to whether or not the road connection information is to be eliminated from the extracted map data is made based upon the geographical conditions having been set (Fig. 6 and col. 23, lines 24-30 wherein the type of roads and their distance to the route/present position constitute the claimed geographical conditions).

3) Claim 5 (depends on claim 1): wherein if the extracted map data include road data related to a road which does not connect with the recommended route, a decision is made to eliminate the road connection information corresponding to the road data (Fig. 3a, item "(3)").

4) Regarding claim 8:

Saeki et al. discloses a map data transmission method (Figs. 2a-2b, 3a-3b and 6; col. 14, "embodiment 3"; col. 17, "embodiment 6"; col. 22, "embodiment 8") comprising: determining a recommended route (col. 22, lines 44-67) extending from a current position to a destination; extracting map data that include road shape information indicating a shape of a road (Figs. 7, 9-11, 15-17 depicting roads having shapes and connections recreated using received information) over a slicing range set within a predetermined distance from the determined recommended route from the map data (col. 22, lines 62-67; col. 24, lines 8-15); making a

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decision as to whether or not part of the road shape information is to be eliminated from the extracted map data (Fig. 6; col. 14, lines 13-65; col. 23, lines 24-30 in which roads eliminated include both road shape and road connection information); and transmitting a remaining part of the road shape information corresponding to the road obtained by eliminating part of the road shape information corresponding to the road from the extracted map data if results of the decision indicate that part of the road shape information is to be eliminated (col. 14, lines 13-65; col. 23, lines 24-30, whereby the eliminated part comprises road shape and road connection information, and the remaining/transmitted part also comprises road shape and road connection information, thus meeting the claimed limitations).

5) Claim 9 (depends on claim 8): wherein if the extracted map data include road data related to a road which does not connect with the recommended route, a decision is made to eliminate part of the road shape information corresponding to the road data (Fig. 3a, item "(3)").

6) Claim 13 (depends on claim 1): claimed information distribution apparatus (Fig. 1).

7) Claim 14: claimed information terminal at which a map is displayed by using map data transmitted from an information distribution apparatus according to claim 13, comprising: a reception device that receives the map data (reception device inherently corresponding to transmitting unit 15 of Fig. 1); and display device that displays map data corresponding to the recommended route and map data contained within a specific distance from the recommended route based upon the received map data (Figs. 10-11).

8) Regarding claim 20, Saeki et al. met all of the claimed subject matter, including the claimed information distribution apparatus that executes a map data transmission method according to claim 8 (Fig. 1).

Claim Rejections - 35 USC § 103

4. Claims 6-7 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al.

1) Regarding claim 6, Saeki et al. met all of the claimed subject matter as in claim 1, except: the claimed wherein a distance from the current position to the destination on the determined recommended route is calculated; total data size of the extracted map data is estimated based upon the calculated distance; and a decision is made to eliminate the road connection information if the estimated total data size is greater than a predetermined value.

However, Saeki et al. does teach to determination of a recommended route from the current position to the destination, and a total data size of the extracted map data for the route (13 of Fig. 1), and a decision is made to eliminate road data including road shape and road connection information if the estimated data size is greater than a predetermined value that is based on the performance capability of the overall system (Abstract; col. 12, lines 44-52 and Fig. 6). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention that the determination of a total data size of the extracted map data for the recommended route in a system such as taught by Saeki et al. is dependent or proportional to the distance between the current position to the destination on the determined recommended route, and therefore the total data size of the extracted map data may be estimated based upon the calculated distance as a specific way of determining the total data size.

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2) Regarding claim 7, Saeki et al. met all of the claimed subject matter as in claim 1, except: wherein information indicating that the road data including road shape and road connection information has been eliminated is attached to the transmitted map data.

However, since the system of Saeki et al. allows user request inputs to alter the operation of the system including information being extracted and transmitted to the vehicle (7 in Fig. 1), it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to attach to the transmitted data information indicating that the road data (road shape and connection information) has been eliminated, so that the user is made aware of such elimination in order for the user to properly make decisions on such requests.

3) Regarding claim 11, Saeki et al. met all of the claimed subject matter as in claim 8, plus the consideration of claim 6 above.

4) Regarding claim 12, Saeki et al. met all of the claimed subject matter as in claim 8, plus the consideration of claim 7 above.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. in view of Tada et al. (US pat. #6,594,580).

1) Regarding claim 3, Saeki et al. met all of the claimed subject matter as in claim 2, except: the claimed wherein: the geographical conditions include an urban area; and a decision is made to eliminate the road connection information if the extracted map data are not corresponding to the urban area.

Saeki et al. teaches a system to ensure that relevant route guidance information is efficiently selected for transmission to the vehicle that is within the capacity/capability of the transmission and display parameters. In the same art of navigation route guidance, Tada et al.

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teaches that limiting road connection information when in limited access roads such as expressways/highways (i.e. when not in urban area) contributes to reducing the time and cost required for sending and receiving route guidance information (col. 11, line 54 to col. 12, line 14). In view of the teachings by Saeki et al. and Tada et al., it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to eliminate road connection information if the extracted map data are not corresponding to the urban area such as taught by Tada et al. in a route guidance information transmission/reception system such as taught by Saeki et al. to reduce the time and cost required for sending and receiving route guidance information.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. in view of Bullock et al. (US pat. #6,691,028).

1) Regarding claim 10, Saeki et al. met all of the claimed subject matter as in claim 8, except: wherein a decision is made to eliminate part of the road shape information included in map data except for map data corresponding to a portion of recommended route which is located on an approaching side to a guidance point on the determined recommended route and within a predetermined distance from the guidance point.

Saeki et al. teaches eliminating road data in the transmission of data to a vehicle for navigation guidance so that the data amount is within predetermined limits. In the same art, Bullock et al. teaches a similar system to minimize data transmitted by selecting crucial data (i.e. data not to be eliminated) for transmission including map data corresponding to a portion of recommended route which is located on an approaching side to a guidance point on the determined recommended route and within a predetermined distance from the guidance point

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(Abstract and Fig. 3). In view of the teachings by Saeki et al. and Bullock et al., it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to exclude the elimination of road data including road shape data in Saeki et al. using a specific exception criteria of map data corresponding to a portion of recommended route which is located on an approaching side to a guidance point on the determined recommended route and within a predetermined distance from the guidance point such as taught by Bullock et al. so that such map data crucial for navigation is retained for navigation guidance.

7. Claims 15-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. in view of Mutsuga et al. (US pat. #5,911,773).

1) Regarding claim 15, Saiki et al. discloses a map data transmission method comprising: determining a recommended route extending from a current position to a destination setting a slicing range within a predetermined distance from the determined recommended route; making a decision as to whether or not a facility satisfying a specific requirement is present in an area beyond the slicing range; except: specifying the claimed resetting the slicing range by expanding the slicing range so that the slicing range includes the facility and a road connecting with the facility, if the facility is decided to be present in the area beyond the slicing range; extracting map data over the reset slicing range; and transmitting the extracted map data.

While Saiki et al. assumes a predetermined range search area would produce multiple searched facilities and then narrowing the search range to single out a closest searched facility to the route or current position (col. 24, lines 11-32), Mutsuga et al. teaches the known expansion of the search range when no desired search facility is found in the initial search range (col. 16, lines 27-30). In view of the teachings by Saiki et al. and Mutsuga et al., it would have been obvious to

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one of ordinary skill in the art at the time of the claimed invention to include the search range expansion feature of Mutsuga et al. in Saiki et al. in case said assumption is false so that the system can continue to operate as intended.

9) Claim 16 (depends on claim 15): wherein the road connecting with the facility is an access road connecting the recommended route with the facility and also a return road connecting the facility with the recommended route (Fig. 7 of Saiki et al.).

10) Claim 17 (depends on claim 15): wherein the facility satisfying the specific requirement is a specific type of facility that a user is likely to wish to use while traveling on the recommended route at a specific estimated time point (col. 18, lines 1-53 and Fig. 7 of Saiki et al.).

11) Claim 19: claimed information terminal at which a map is displayed by using map data transmitted by adopting a map data transmission method according to claim 15, comprising: a reception device that receives the map data (reception device inherently corresponding to transmitting unit 15 of Fig. 1 of Saiki et al.); and display device that displays a road map and a facility mark within the reset slicing range based upon the received map data (Figs. 10-11 of Saiki et al. and col. 16, lines 27-30 of Mutsuga et al.).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. in view of Mutsuga et al. and Hirota et al. (US pat. #5,568,390).

1) Regarding claim 18, Saeki et al. and Mutsuga et al. render obvious all of the claimed subject matter as in claim 15, except: the claimed wherein the specific requirement satisfied by the facility is an estimated traveling distance, an estimated time point or an estimated geographical position at which a remaining fuel quantity becomes equal to or smaller than a

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predetermined value while traveling on the recommended route and the facility by which the specific requirement is satisfied relates to a refueling facility.

While Saeki et al. teaches allowing a user to manually request refueling facility information that is extracted when satisfying predetermined requirements, Hirota et al. teaches a more automated feature in which refueling facility near the route is searched and displayed to the user when an estimated traveling distance, an estimated time point or an estimated geographical position at which a remaining fuel quantity becomes equal to or smaller than a predetermined value while traveling on the recommended route (Fig. 12 and related disclosure).

In view of the teachings by Saeki et al., Mutsuga et al. and Hirota et al., it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include the more automated refueling facility extraction feature such as taught by Hirota et al. in a navigation guidance system such as taught by Saeki et al. and Mutsuga et al. to provide increased convenience and ease of operation for the user.

Allowable Subject Matter

9. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 21 is objected due to minor informalities.

Response to Arguments

11. Applicant's arguments filed 3/27/07 have been fully considered but they are not persuasive. Applicant's arguments are not deemed persuasive, because the claims do not recite transmitting road shape information without corresponding road connection information. As

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such, Saeki et al. which unselects non-prioritized (low priority) parts reads on the claimed limitation, in that unselected map sections including both road shape and road connection information are omitted, while selected (remaining) map sections including both road shape and road connection information are transmitted.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

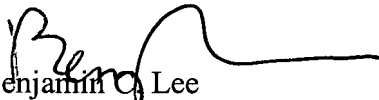
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin C. Lee whose telephone number is (571) 272-2963. The examiner can normally be reached on Mon -Thu 11:00Am-7:30Pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Benjamin C. Lee
Primary Examiner
Art Unit 2612

B.L.